WHAT IS CLAIMED IS:

1. A ciphering apparatus comprising:

a blocking section which divides plaintext into blocks;

an attribute setting section which sets a ciphering attribute for use in ciphering each of the blocks;

a ciphering section which ciphers each of the blocks in accordance with a ciphering attribute set for the block to obtain a ciphertext; and

an output section which outputs the ciphertext and the ciphering attribute used for obtaining the ciphertext.

2. The apparatus according to claim 1, wherein the ciphertext and the ciphering attribute outputted by said output section are stored as separate files.

3. The apparatus according to claim 1, wherein the ciphertext and the ciphering attribute outputted by said output section are stored as one file.

4. The apparatus according to claim 1, wherein said ciphering attribute comprises a location information indicating a position of the block, size information indicating a size of the block, user information indicating a user who has a right to access the block, and a ciphering key information.

5. The apparatus according to claim 1, wherein said blocking section comprises a sub-blocking

section which divides one block into small sub-blocks;

said attribute setting section comprises a sub-attribute setting section which sets a sub-ciphering attribute for use in ciphering each of the sub-blocks; and

said ciphering section comprises a sub-ciphering section which ciphers each of the sub-blocks in accordance with the sub-ciphering attribute.

6. The apparatus according to claim 5, wherein said ciphering section ciphers the blocks and then ciphers the sub-blocks.

7. The apparatus according to claim 5, wherein said ciphering section ciphers the sub-blocks and then ciphers the blocks.

8. A ciphering method comprising:

dividing plaintext into blocks;

setting a ciphering attribute for use in ciphering each of the blocks;

ciphering each of the blocks in accordance with a ciphering attribute set for the block to obtain a ciphertext; and

outputting the ciphertext and the ciphering attribute used for obtaining the ciphertext.

9. The method according to claim 8, further comprising:

storing the outputted ciphertext and the outputted ciphering attribute as separate files.

10. The method according to claim 8, further comprising:

storing the outputted ciphertext and the outputted ciphering attribute as one file.

11. The method according to claim 8, wherein said ciphering attribute comprises a location information indicating a position of the block, size information indicating a size of the block, user information indicating a user who has a right to access the block, and a ciphering key information.

12. The method according to claim 8, wherein

said blocking comprises dividing one block into small sub-blocks;

said attribute setting comprises setting a sub-ciphering attribute for use in ciphering each of the sub-blocks; and

said ciphering comprises ciphering each of the sub-blocks in accordance with the sub-ciphering attribute.

13. The method according to claim 12, wherein said ciphering comprises ciphering the blocks and then ciphering the sub-blocks.

14. The method according to claim 12, wherein said ciphering comprises ciphering the sub-blocks and then ciphering the blocks.

15. An article of manufacture comprising a computer usable medium having computer readable program

code means embodied therein, the computer readable program code means comprising:

computer readable program code means for causing a computer to divide plaintext into blocks;

5   computer readable program code means for causing a computer to set a ciphering attribute for use in ciphering each of the blocks;

computer readable program code means for causing a computer to cipher each of the blocks in accordance

10   with a ciphering attribute set for the block to obtain a ciphertext; and

computer readable program code means for causing a computer to output the ciphertext and the ciphering attribute used for obtaining the ciphertext.